

FIG. 1

| | | | | | |
|-------|--------------------------|-------------------|------|------|------|
| (1) | 1ST DATA a | 0 | 1 | 0 | 1 |
| | 1ST DATA b | 0 | 0 | 1 | 1 |
| <hr/> | | | | | |
| | 2-BIT DATA | '00' | '01' | '10' | '11' |
| (2) | 1ST OPERATION (a NAND b) | 1 | 1 | 1 | 0 |
| | 2ND OPERATION (NOT b) | 1 | 1 | 0 | 0 |
| | 3RD OPERATION (a NOR b) | 1 | 0 | 0 | 0 |
| | <hr/> | | | | |
| | NO. OF 1 | 3 | 2 | 1 | 0 |
| (3) | DATA | THRESHOLD VALUE | | | |
| | '00' | <hr/> | | | |
| | '00' | V0 - 3Va | | | |
| | '01' | V0 - 2Va | | | |
| | '10' | V0 - Va | | | |
| | '11' | V0 (=ERASE LEVEL) | | | |

FIG. 2

| | | | | | |
|------------------------------------|---|---|---|---|----------------------|
| c | 0 | 0 | 0 | 1 | (READ LEVEL: HIGHT) |
| d | 0 | 0 | 1 | 1 | (READ LEVEL: MEDIUM) |
| f | 0 | 1 | 1 | 1 | (READ LEVEL: LOW) |
| <hr/> | | | | | |
| \bar{d} NAND f | 1 | 0 | 1 | 1 | |
| (\bar{d} NAND f) NAND \bar{c} | 0 | 1 | 0 | 1 | = a |
| d | 0 | 0 | 1 | 1 | = b |

FIG. 3

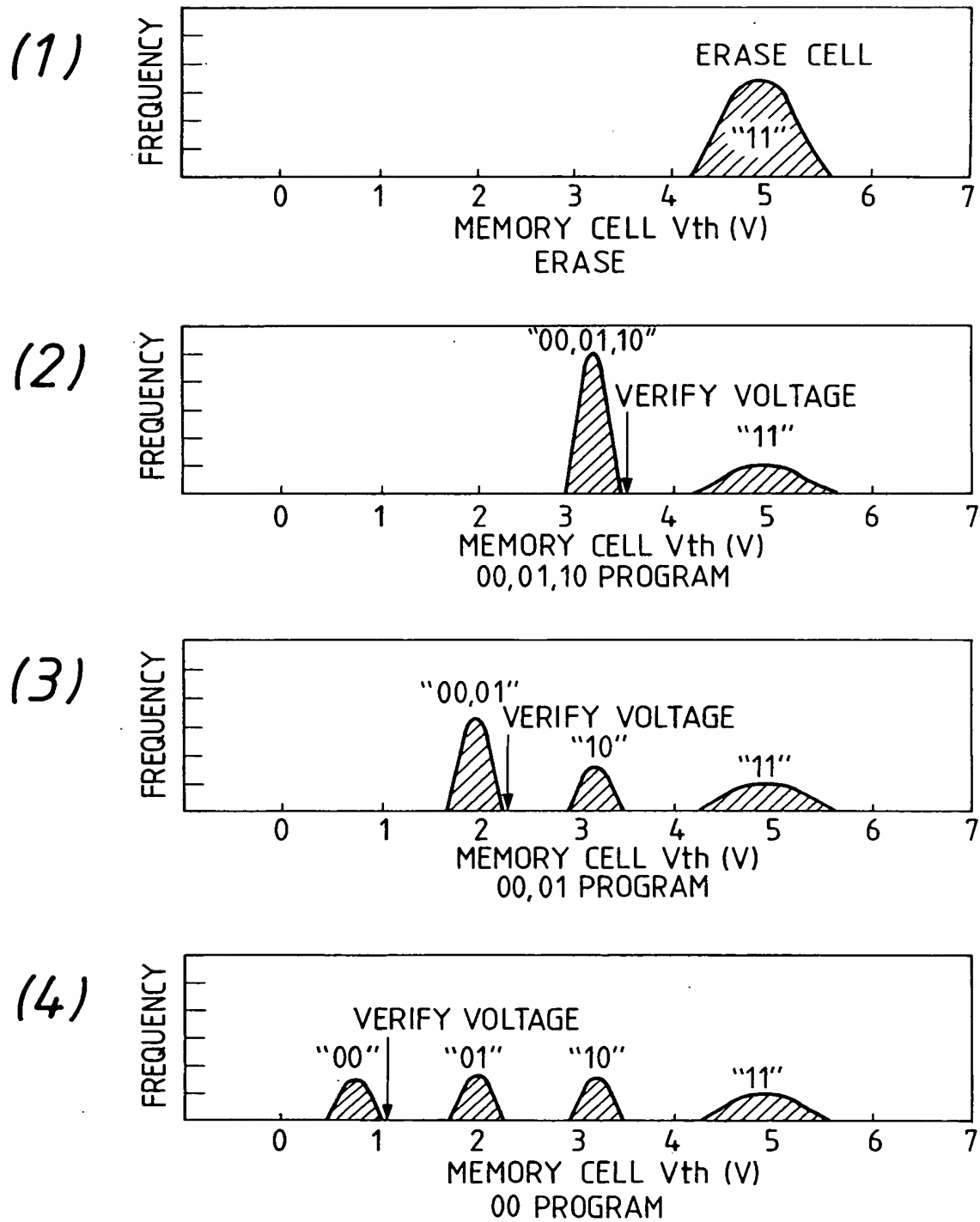


FIG. 4

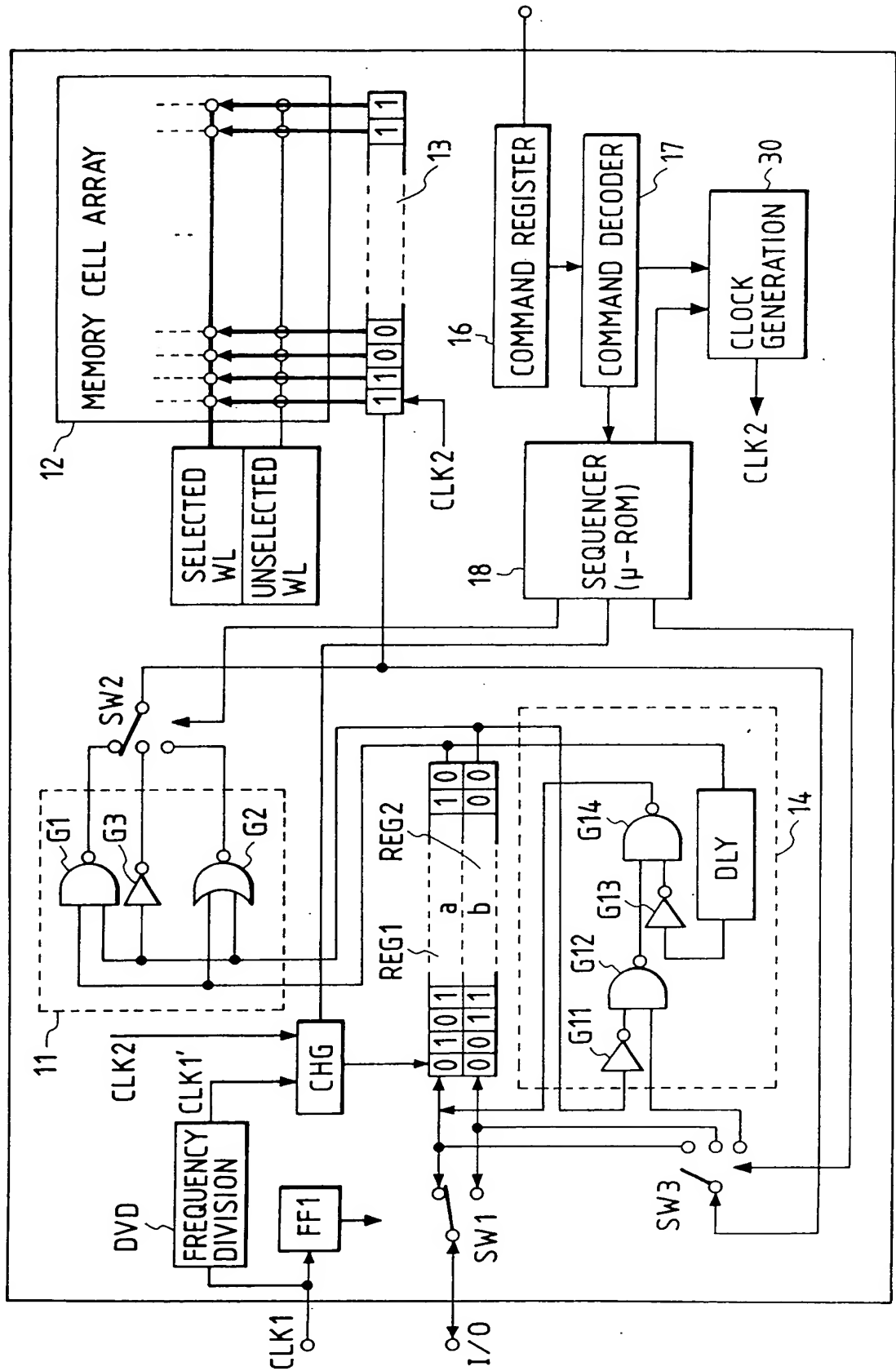


FIG. 5

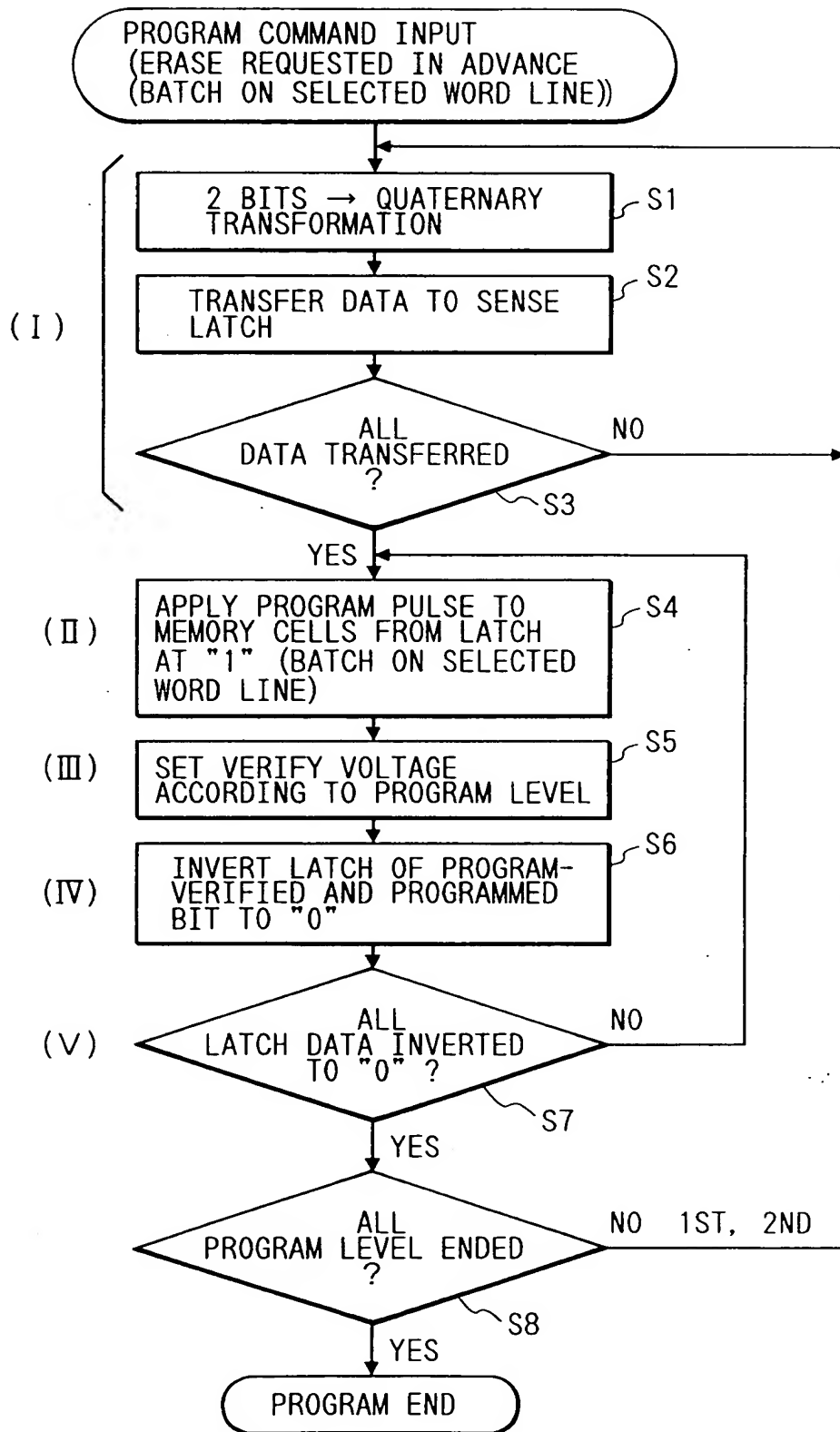


FIG. 6

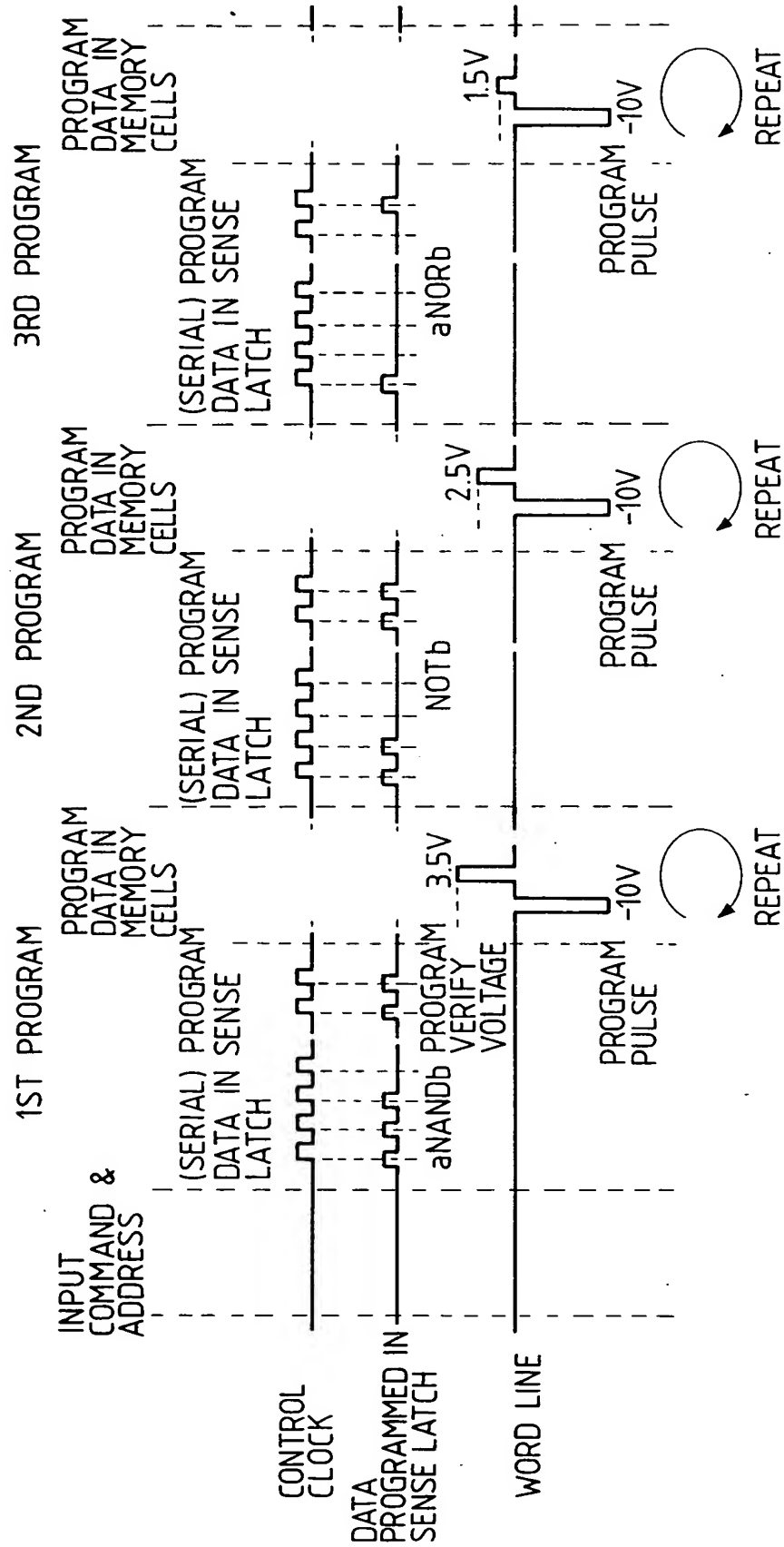


FIG. 7

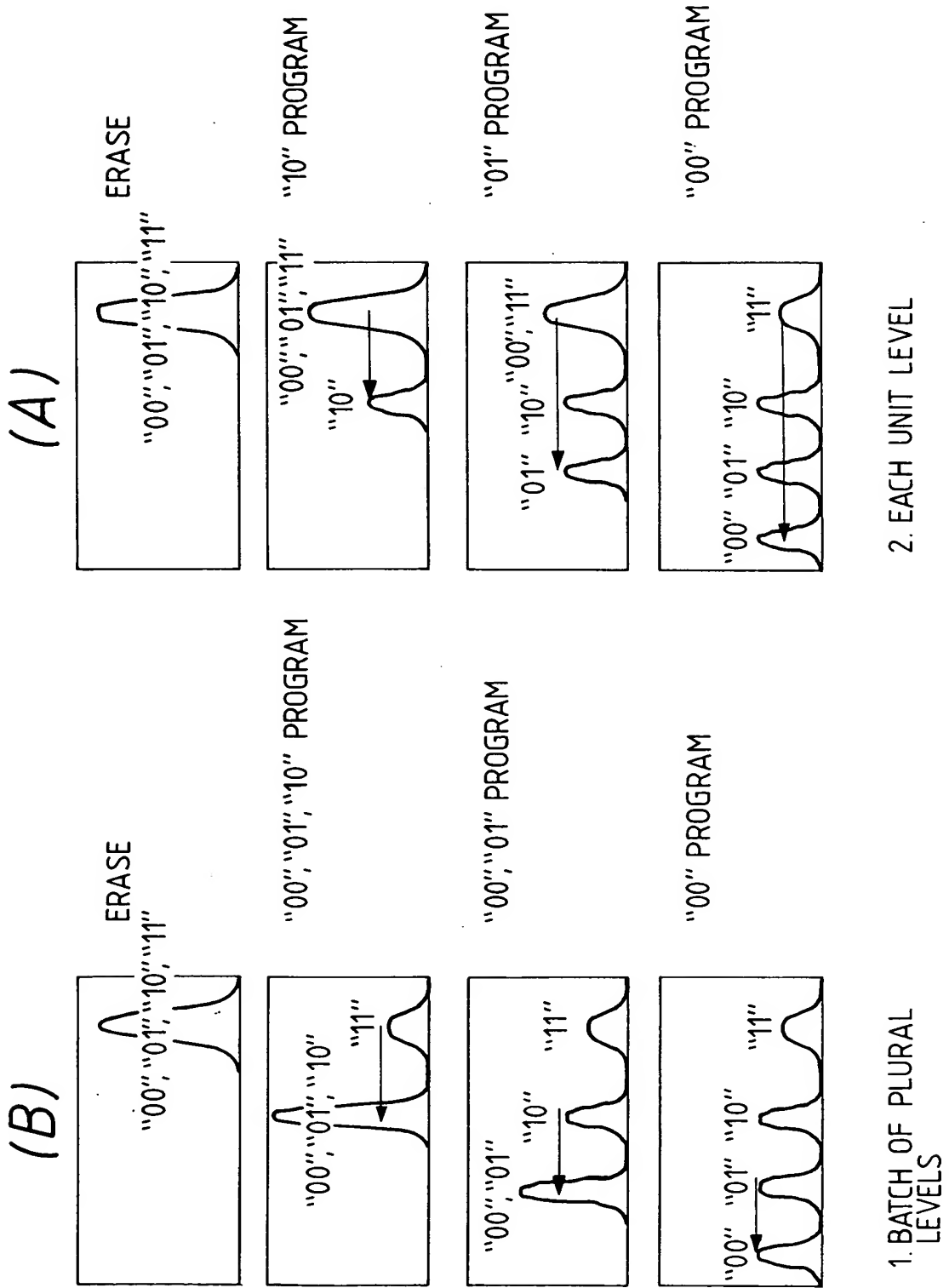


FIG. 8

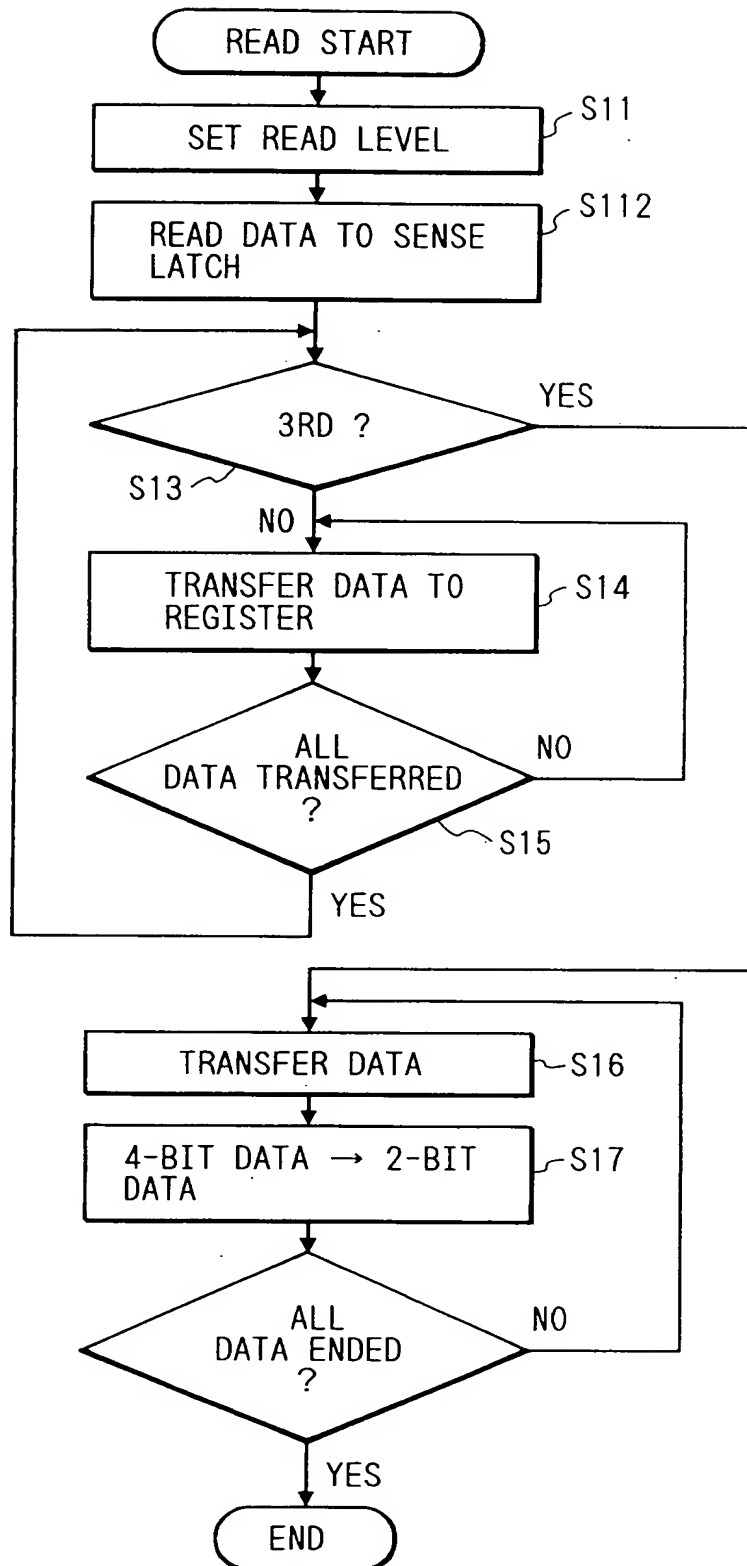


FIG. 9

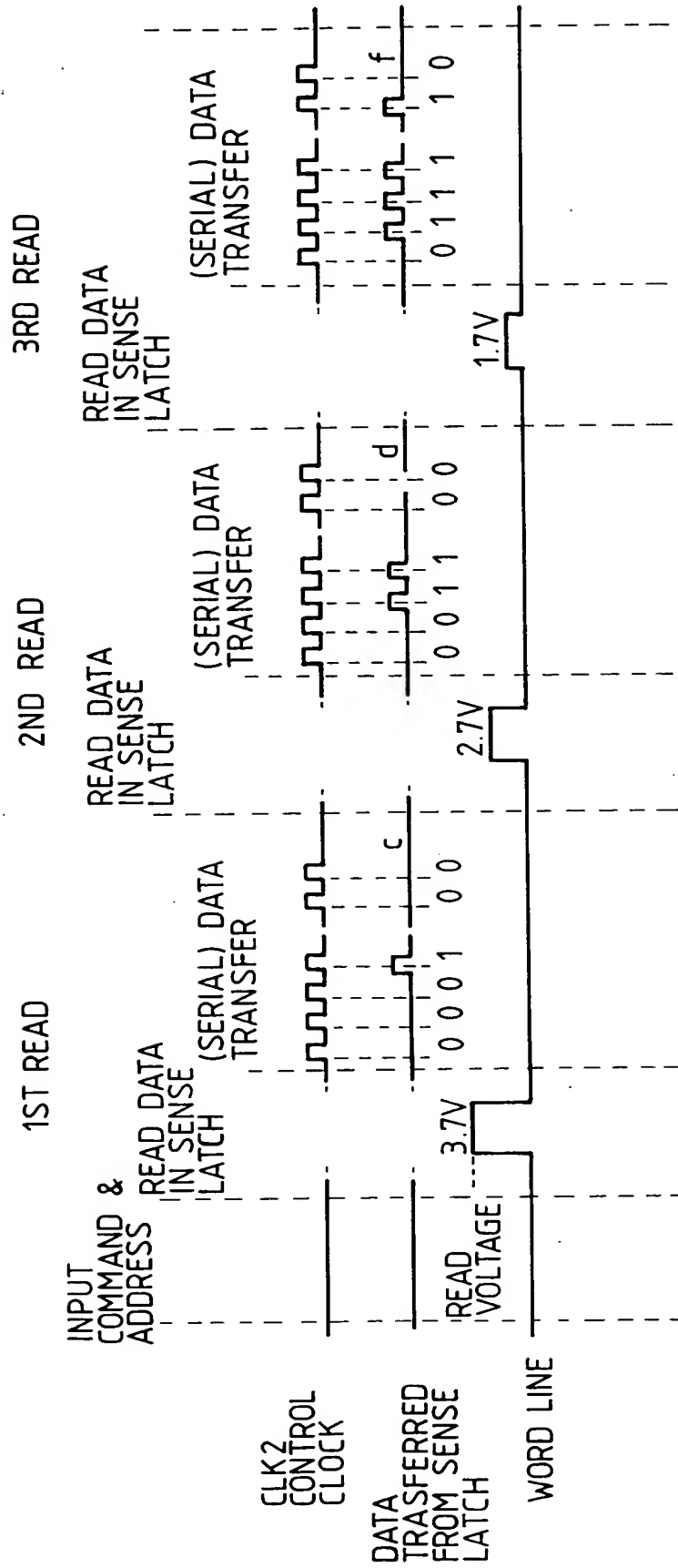


FIG. 10

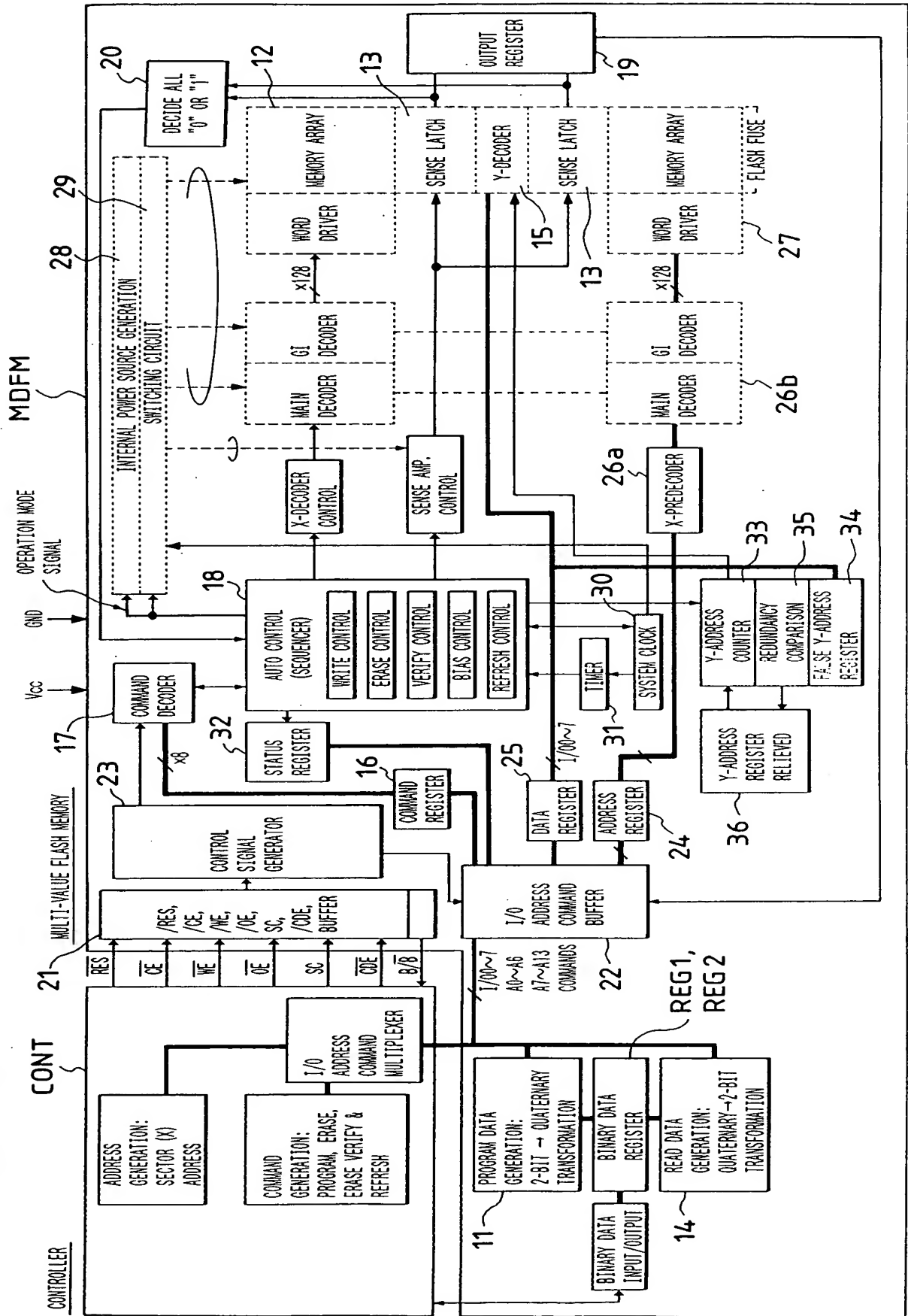


FIG. 11

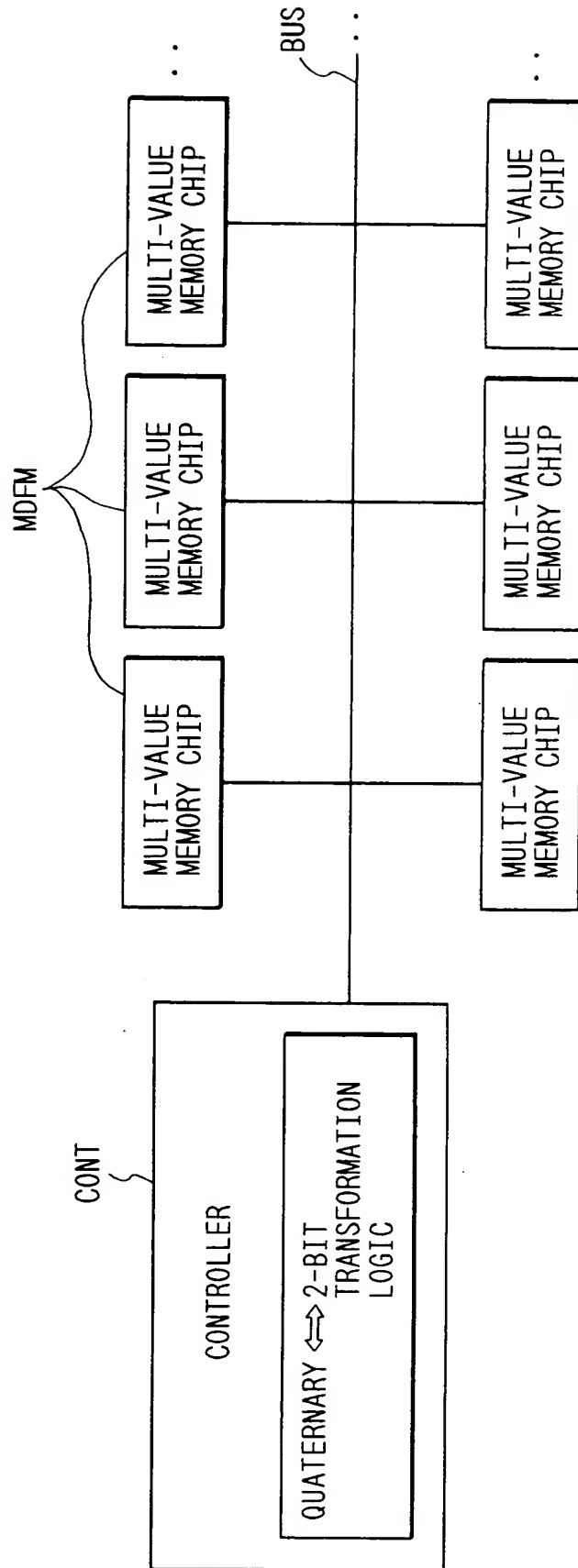


FIG. 12

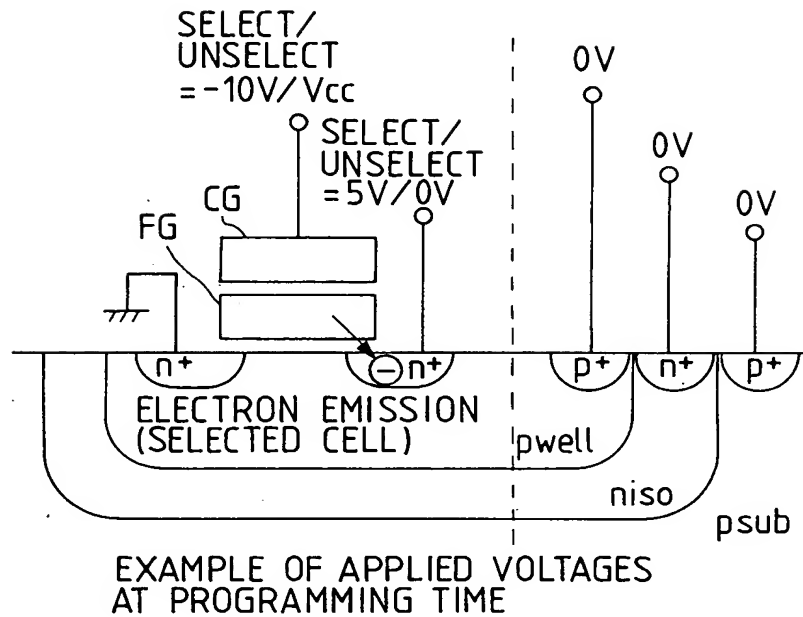


FIG. 13

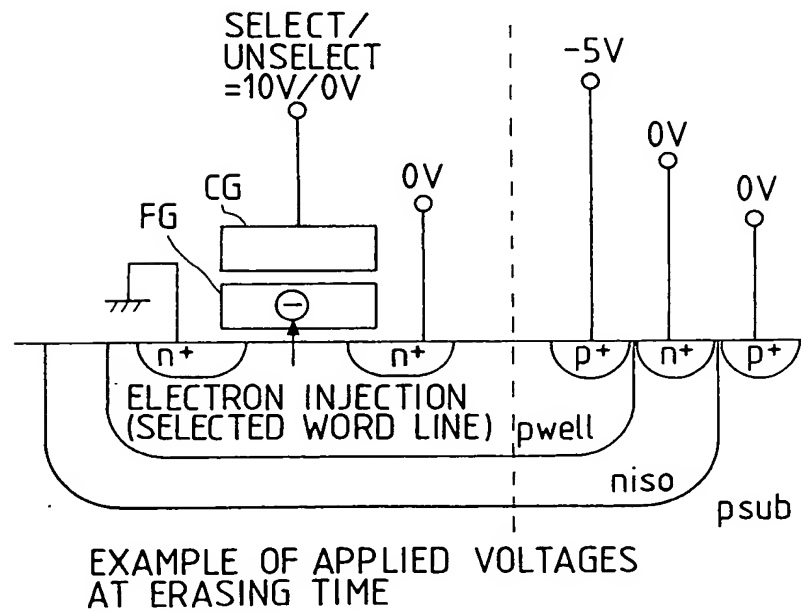


FIG. 14

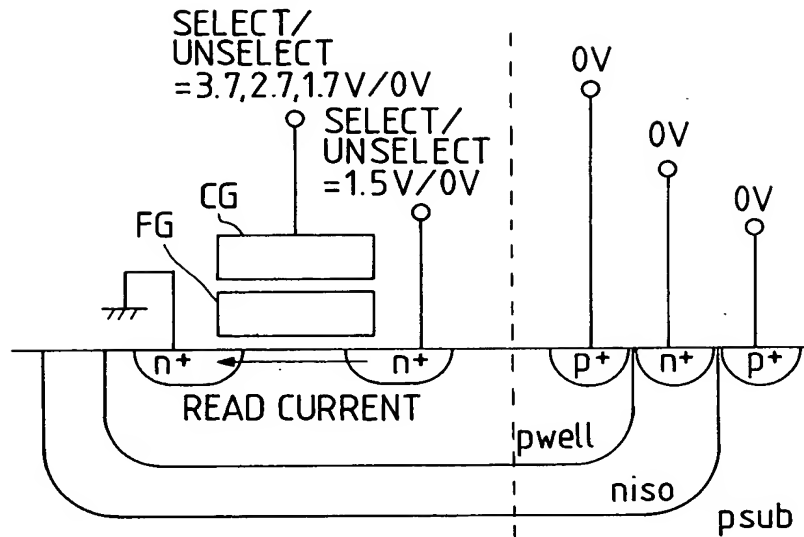
EXAMPLE OF APPLIED VOLTAGES
AT READING TIME

FIG. 15

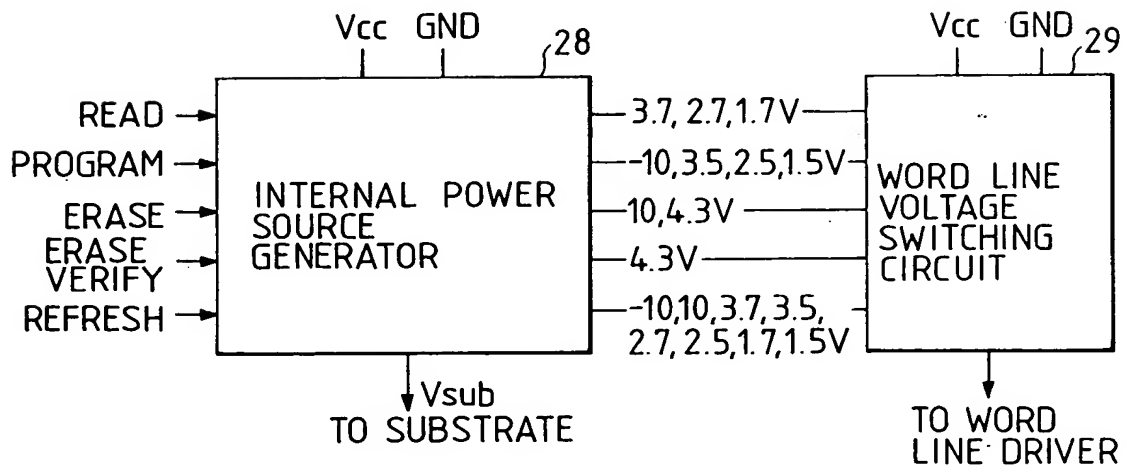


FIG. 16

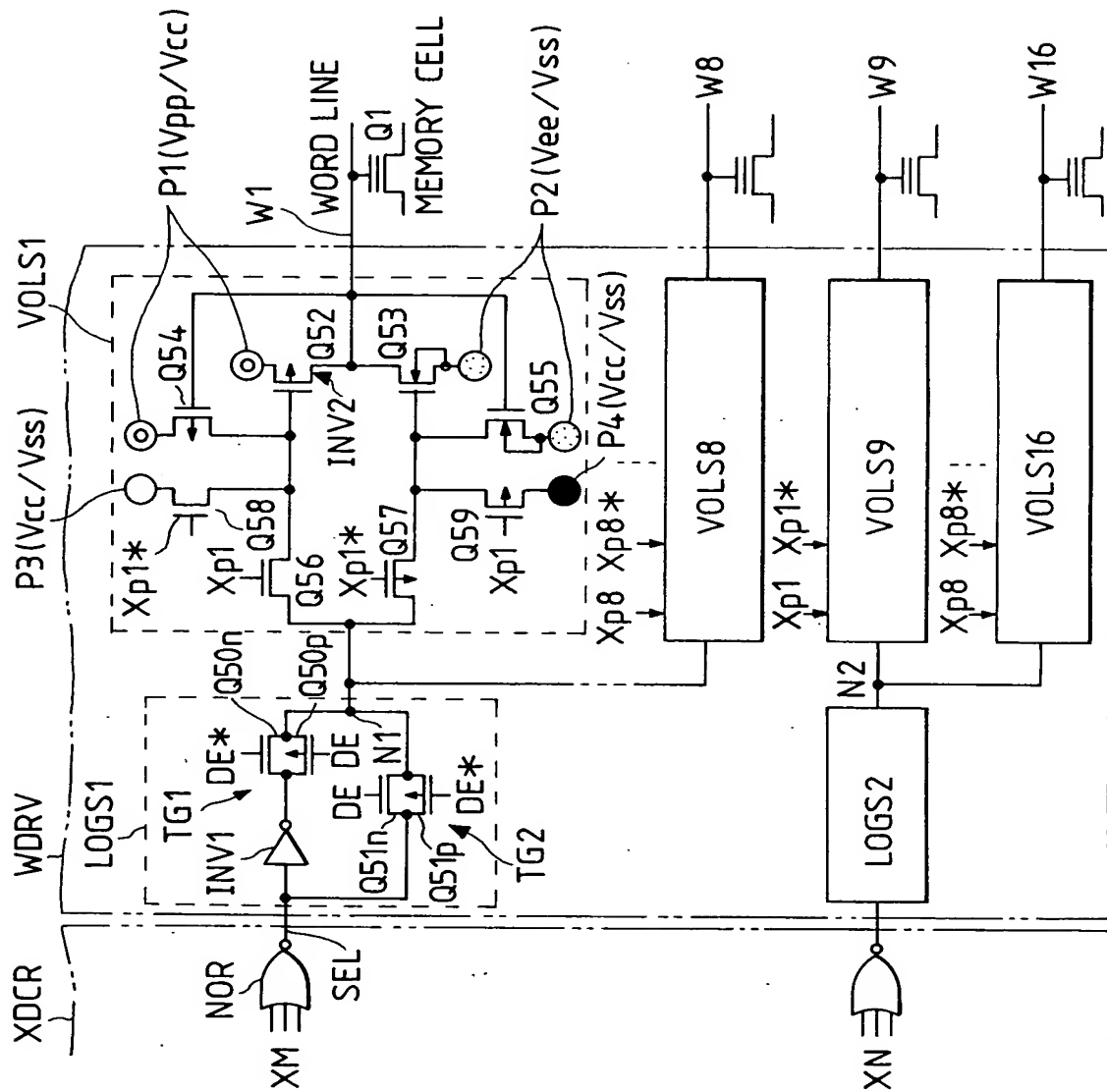


FIG. 17

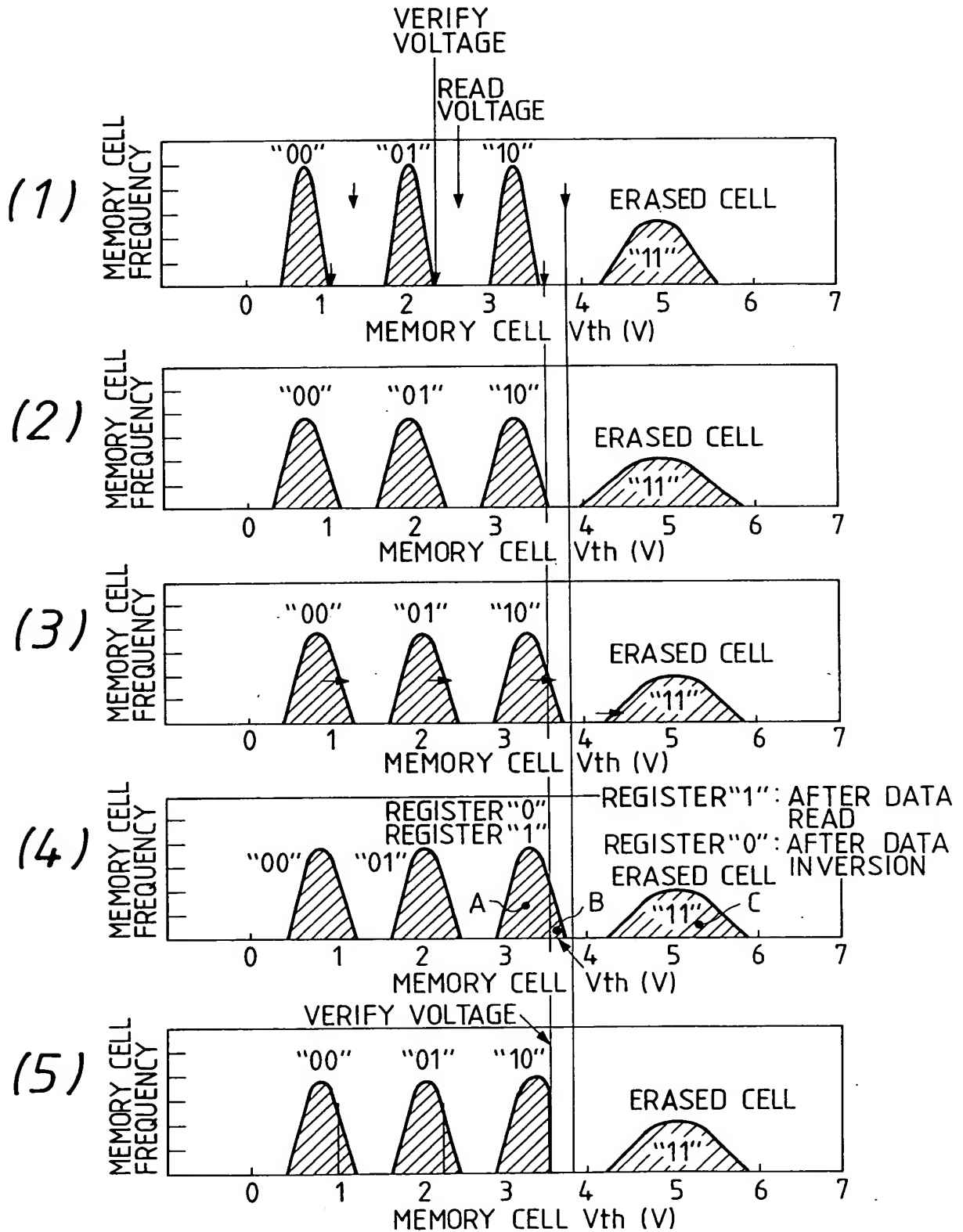


FIG. 18

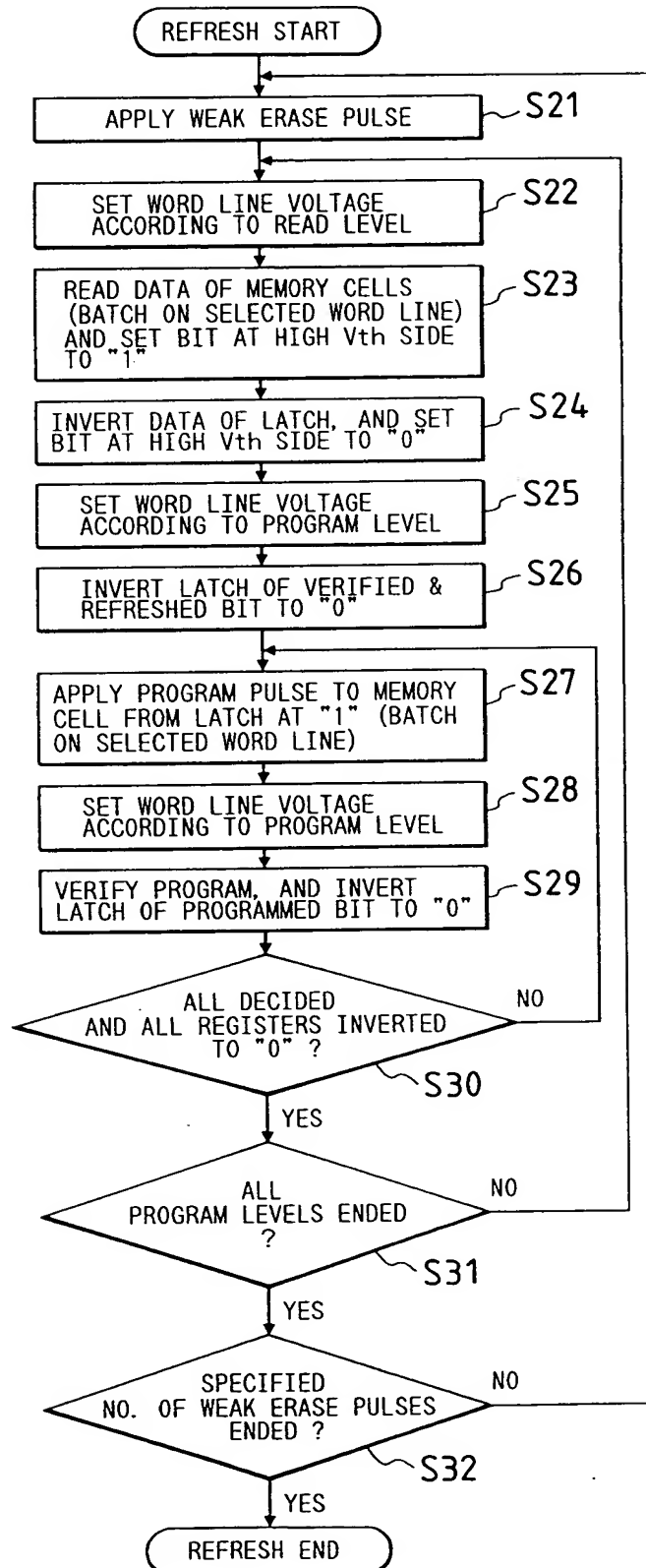


FIG. 19

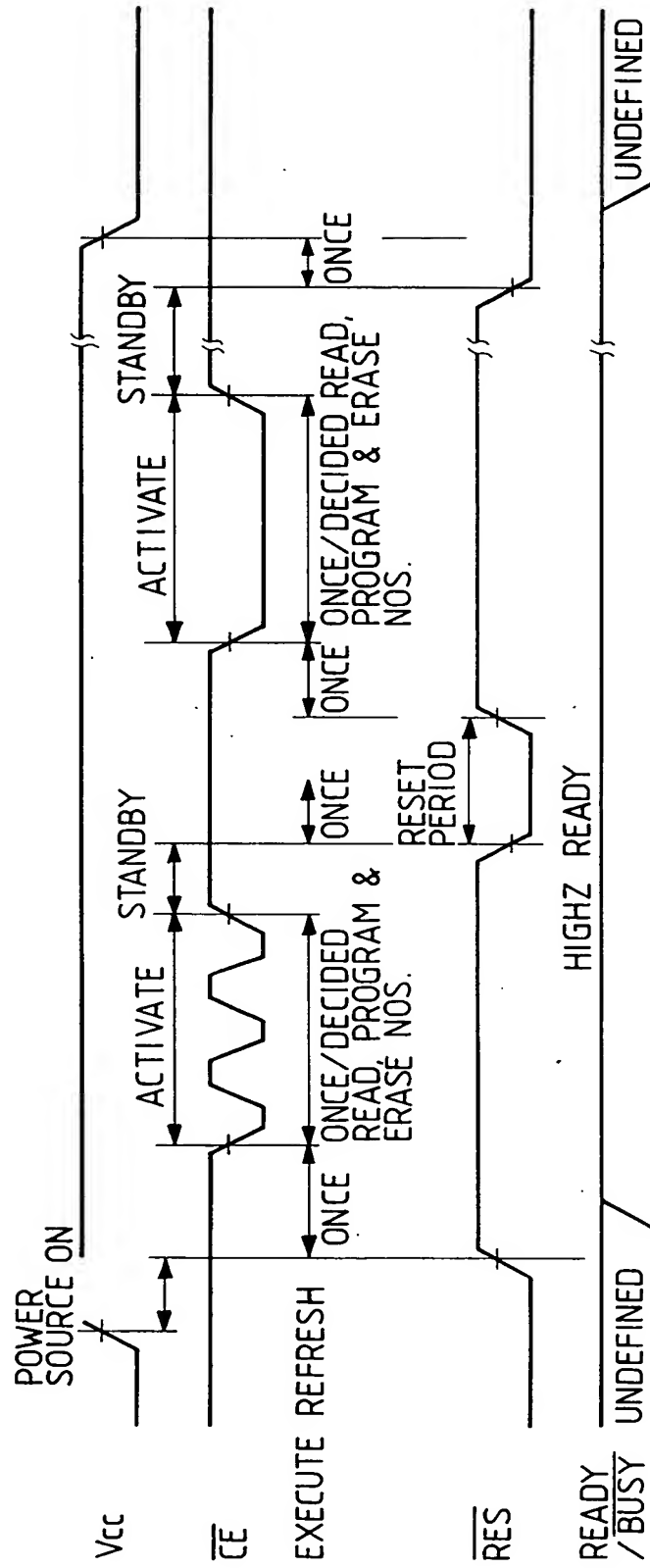


FIG. 20

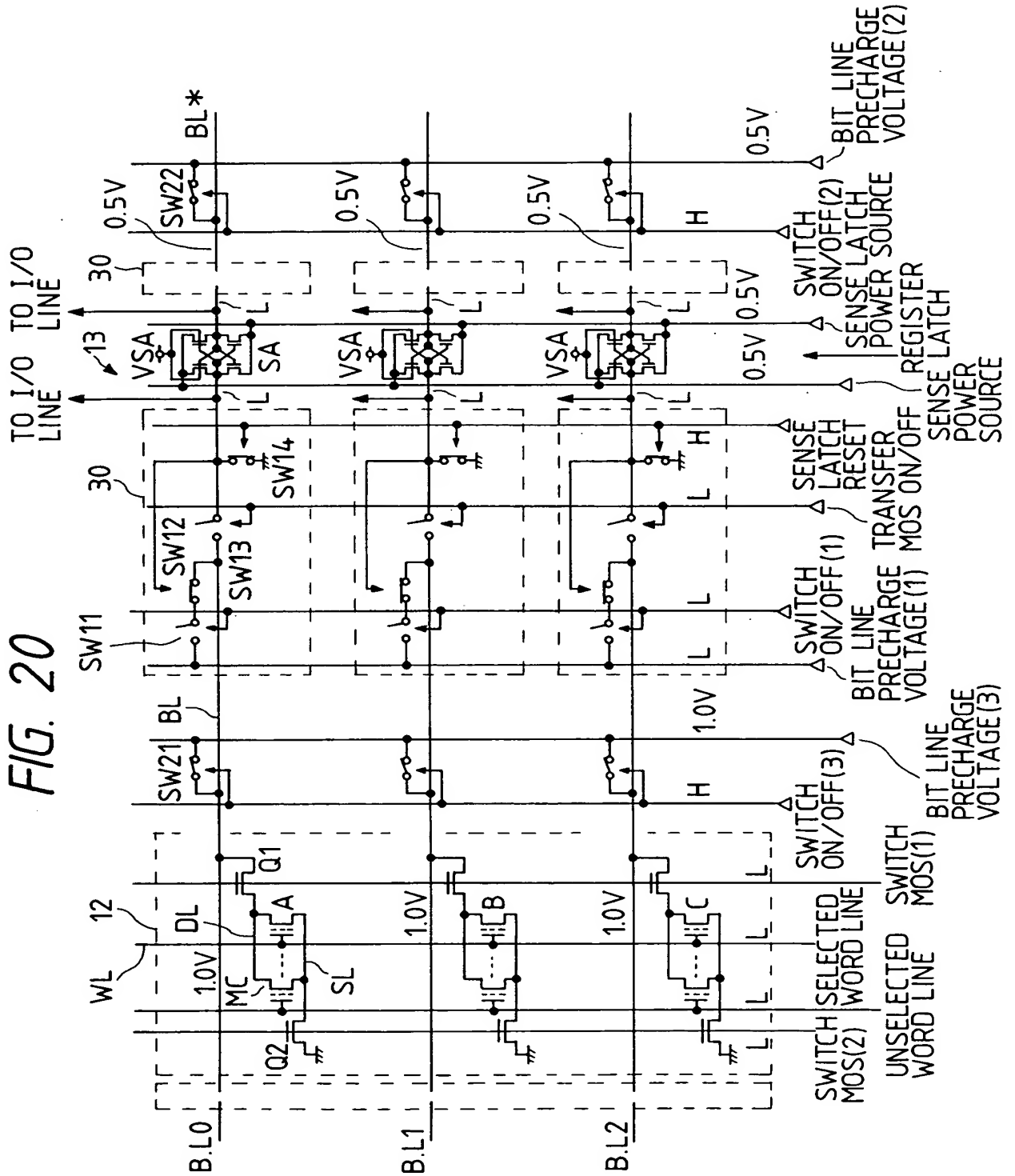


FIG. 22

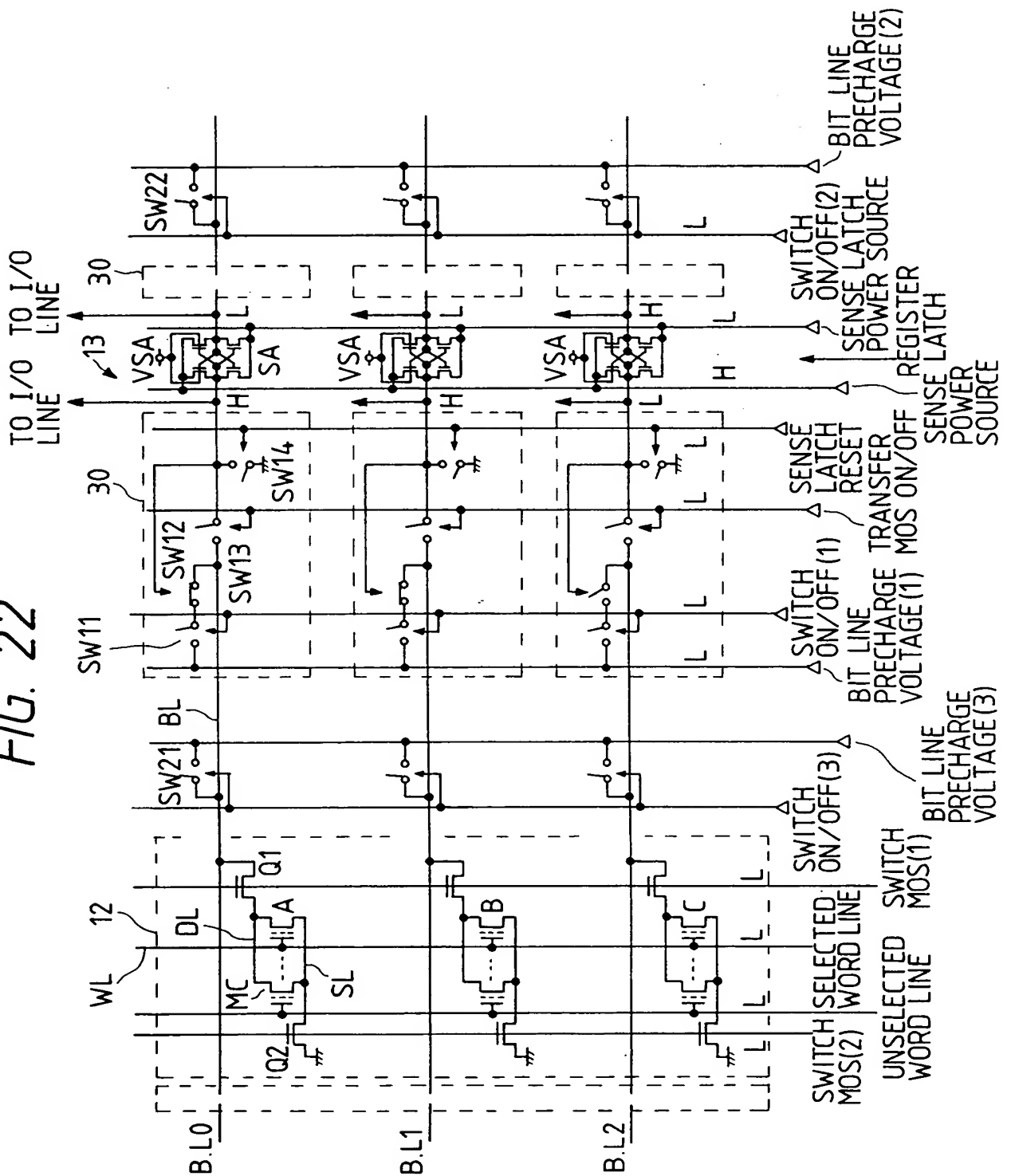


FIG. 23

